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A REVIEW OF THE NORTH AMERICAN SPECIES OF NEMOTELUS. PLATE 4.

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The genus NEMOTELUS, or NEMATOTELUS, includes a group of rather small Stratiomyiidae generally of dark coloration, characterized by the prolongation of the lower part of the face. From the underside of this rostellum projects the slender and long drawn-out proboscis which has gained the generic name for these insects. However instead of being used as a weapon these mouth parts are admirably adapted for their function of feeding from the long throated florets of the cone-flowers. These small flies are not rare; where they occur they can be caught by dozens from the heads of their favorite flowers. From the few published records concerning this genus it would seem that in the Eastern States *N. carbonarius* is the most abundant. In Illinois *N. unicolor* is the prevailing form. This species also, has the greatest distribution, occurring to Hayti and Mexico. *Nemotelus canadensis* is commonest in Colorado, *N. crassus* in Kansas, while the Texas species are all equally abundant.

The European species of this genus have been divided into three groups by Dr. H. Loew, as follows:—

1. All the tibiae in part black,
2. Hind tibiae only in part black,
3. All the tibiae with almost no black.

On this basis the North American species would be grouped thus:—

1. <i>tristis</i>	1. <i>unicolor</i>	1. <i>pallipes</i>
2. <i>carneus</i>	2. <i>carbonarius</i>	2. <i>wheeleri</i>
3. <i>glaber</i>	3. <i>canadensis</i>	3. <i>acutirostris</i>
4. <i>slossonae</i>	4. <i>crassus</i>	4. <i>flavicornis</i>
5. <i>bellulus</i>	5. <i>arator</i>	5. <i>immaculatus</i>
	6. <i>bruesii</i>	6. <i>albirostris</i>
	7. <i>polyposus</i>	7. <i>trinotatus</i>

Of these groups the first seems incongruous, but the other two are well constructed. The species of the second have black males, stubby faces, and as a

whole occur inland. The third, however, is a maritime group. The males have white abdomens and the faces are produced and pointed. *Nemotelus pallipes* Say is an anomalous species of the group. It is interesting to note that apparently so trivial a character as the relative extent of the dark color on the tibiae should be correlated with much more striking differences. Another remarkable correlation was noticed for the species in the collection. Those with black males (*N. unicolor*, *crassus*, *carbonarius*, *canadensis*, and *arator*) have the third vein of the wings simple; those species whose males have whitish abdomens have the third vein furcate (*N. wheeleri*, *trinotatus*, and *bellulus*). *Nemotelus bruesii*, however, is anomalous in this as well as in other respects. With this division in mind Mr. C. W. Johnson was asked to furnish data from the types of his species. *Nemotelus immaculatus* is injured, but *N. slossonae* and *flavicornis* have the third vein simple. Although these species have the abdomen white, it is nevertheless marked with a blackish design. We shall look forward with interest for an account of this characteristic in the other species.

In the preparation of this paper I have had access to the Hough collection of the University of Chicago. My own material supplemented by specimens from Dr. Wm. M. Wheeler has been of the greatest use. In conclusion I wish to thank Mr. Charles W. Johnson of Boston for his assistance in furnishing literature not accessible in Chicago and for the information regarding the types of his species.

KEY TO THE SPECIES.

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|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|
| Males: eyes contiguous, or nearly so | 2. |
| Females: eyes widely separated | 17. |
| 2. Abdomen entirely black, or black with whitish marks | 3. |
| Abdomen whitish or whitish with black markings | 11. |
| 3. Antennae situated at the middle of the short and blunt rostellum; proboscis geniculate at its outer third, the outer part pilose; eyes contiguous and impressed along line of juncture; third vein furcate; black species with golden pubescence | <i>bruesii</i> , sp. n. |
| Antennae situated at base of the longer and more acute rostellum | 4. |
| 4. Venter with a series of medial rufous spots; legs beyond base of femora yellowish; costal veins white; greenish black species | <i>pallipes</i> Say |
| Venter immaculate; hind legs at least in part blackened; third longitudinal vein simple | 5. |
| 5. Body black, with no pale lateral markings on the thorax | 6. |
| Thorax with pale lateral markings | 8. |

6. Body with purple tinge; hind tibiae black in the middle; tip of tarsi black
polyposus Say
Body shining black, not purplish 7.
7. Front immaculate; eyes subcontiguous; base and apex of hind tibiae pale;
anterior tibiae subfuscous *carbonarius* Loew
Front bimaculate; base of all the tibiae pale *tristis* Bigot
8. Pilose species with greenish luster *arator*, sp. n.
Bare or nearly so 9.
9. Eyes contiguous; metallic blue-black; front spotted with white
canadensis Loew
Eyes subcontiguous; front black 10.
10. Shining black species *nigrinus* Fallén
unicolor Loew
Shining blue-green species *crassus* Loew
11. Abdomen with black dorsal markings; thorax black with a lateral line;
third vein simple 12.
Abdomen wholly whitish, unspotted; third vein furcate 13.
12. Thorax greenish black; abdomen with two central black spots in the fourth
and fifth segments; posterior femora and tibiae brown in the middle
flavicornis Johnson
Thorax black; abdomen with a basal black mark also; legs largely black,
tip of femora, base and tip of tibiae and tarsi whitish *slossonae* Johnson
13. Proboscis, geniculate at the middle, the basal part enlarged; lateral line of
thorax obsolete, humeral spot small 14.
Proboscis geniculate before the middle 15.
14. Legs yellow; antennae yellow, proboscis red *immaculatus* Johnson
Femora at least blackened; antennae black; proboscis black
trinotatus, sp. n.
15. Face comparatively short, black; thorax shining, pubescence rather erect;
eyes depressed along line of meeting *bellulus*, sp. n.
Face longer, yellowish above 16.
16. Length 3 mm.; antennae yellow except tip; thorax greenish; front linear
albirostris Macquart
Length 5 mm.; antennae blackish; thorax slaty black, subshining, with
appressed pubescence; eyes contiguous, not depressed along line of meet-
ing *wheeleri*, sp. n.
17. Abdomen above with whitish lines or spots; third vein furcate 18.
Abdomen above wholly black; third vein not branched (except *bruesii*) 21.
18. Markings of abdomen arranged in a median series of triangular spots; head

- long conical flattened, antennae inserted midway between the eyes and the tip of the rostellum; proboscis geniculate at the middle *trinotatus*, sp. n.
 Markings of abdomen arranged in a double series; head in profile more or less hollowed out at the antennae; proboscis geniculate before the middle 19.
19. Abdomen with whitish markings beneath, at least in the middle; face very long and sharp, frequently paler above; thorax shining; 3 mm. *acutirostris* Loew
 Abdomen black beneath; if the face is long the thorax is not shining 20.
20. Thorax granular, subshining, sparsely pubescent; facial projection long, acute; humeral mark small, frontal spots punctiform *wheeleri*, sp. n.
 Thorax polished, nearly bare; face short, black; humeral mark large; frontal spots transverse *bellulus*, sp. n.
21. With a whitish spot on each side of the front above the antennae 22.
 With no whitish spot on the front 25.
22. Facial projection shorter than width of eye; antennae inserted near its tip; lateral line of thorax obsolete *bruesii*, sp. n.
 Facial projection equal to width of eye, antennae inserted near its base 23.
23. Lateral line of thorax well defined 24.
 Lateral line of thorax obsolete *tristis* Bigot
24. Head and thorax nearly bare, subaenescens *canadensis* Loew
 Head and thorax moderately pilose, with a greenish tinge *arator*, sp. n.
25. Sides of thorax with a yellowish line 27.
 Sides of thorax not marked; black shining species 26.
26. Anterior tibiae subfuscous, hind ones black except extreme tip and base *carbonarius* Loew
 All the tibiae vittate with black *carneus* Walker
27. All the femora and tibiae black; thorax with a greenish tinge *glaber* Loew
 Front and middle tibiae rather yellowish 28.
28. Blue-green species 29.
 Black, shining species *nigrinus* Fallén
unicolor Loew
29. Facial projection longer than width of eye *crassus* Loew
 Facial projection shorter than diameter of eye *unicolor*, var.

DESCRIPTIONS OF THE SPECIES.

1. NEMOTELUS CRASSUS Loew.

Nemotelus crassus Loew, Cent. Amer. Diptera, iii, 10. (1)

Williston, Can. ent., 1885, vol. 17, p. 128. (2)

Johnson, List ins. N. J., p. 639. (3)

Female. Stout, of a greenish black somewhat metallic color, front not spotted, antennae black, the tip of the second joint yellowish, a lateral line of the thorax, the knees, the front tibiae, and all the tarsi pale yellowish. Length of body $2\frac{1}{2}$ lines (4.2 mm.), length of wing 2 lines (4 mm.).

Rather stout, bare, highly shining, greenish black, the color of the anterior part of the front and of the face merging to bluish rather than green. Front broad, immaculate. Antennae black, the tip of the second joint brownish or yellowish. Face produced into a rather large sharp cone. Lateral line of the thorax very slender, pale yellowish. Femora black, the tip, however, yellowish; the whole of the front tibiae and the broad base and narrow tip of the hinder ones yellowish, the intervening portion black; tarsi pale yellowish. Halteres white. Wings whitish, the thinner veins similar, the thicker ones very pale yellowish, submarginal cell of an opaque color. (*Translation.*)

Rhode Island ⁽¹⁾; Kansas ⁽²⁾; New Jersey ⁽³⁾.

Profile of head of male and female figured on plate.

2. NEMOTELUS CANADENSIS Loew.

Nemotelus canadensis Loew, Cent., iii, 12. (1)

Male and female. Clothed with short whitish hairs, shining, greenish black, submetallic, antennae black, the lateral line of the thorax very narrow, the tip of the femora, the tibiae except a median ring around the hind ones, and the tarsi yellowish.

Male. Eyes contiguous, frontal triangle yellowish, face drawn out.

Female. Front broad, on each side with a yellowish spot, sometimes faintly marked, face acute.

Length of body $2-2\frac{1}{2}$ lines (4.-4.2 mm.), length of wing 2 lines (4 mm.).

Clothed with short and fine whitish hair, shining, greenish black, somewhat metallic. Head concolorous. Eyes of male contiguous, eyes of female separated on the broad front. The anterior frontal triangle of the male pale yellow above, the front of the female marked on each side with a pale yellow spot. Face of male produced into a moderately prolonged cone, of the female into a subacute one. Lateral line of the thorax whitish yellow, very fine. Abdomen margined with a dirty yellow narrow line sometimes obsolete. Femora black, yellow at the tip; tibiae yellow, the hind ones annulate with a black ring; tarsi yellow, the last joints frequently infuscated or blackened. Halteres white. Wings whitish, the stronger veins pale yellowish, the submarginal cell often of the same color. (*Translation.*)

Hudson Bay Territory, Fort Resolution, (Kennicott.)⁽¹⁾; Colorado, (Hough collection, C. F. Baker).

Profile of head of male and female figured on plate.

3. NEMOTELUS UNICOLOR Loew.

Nemotelus unicolor Loew, Cent., iii, 11. (1)

Williston, Can. ent., 1885, p. 128. (2)

Williston, Biologia Centr.-Amer., Suppl. p. 251. (3)

Nemotelus nigrinus Fallén, v. d. Wulp, Tijdschr. entom., 1867, p. 126. (4)

Female. Bare, shining, black, antennae concolorous, front immaculate, a very slender lateral line on the thorax yellowish, femora black except the yellowish tip, anterior tibiae subfuscous, hind ones black, the base and extreme apex of all yellowish. Length of body $1\frac{3}{4}$ lines (3.5 mm.), length of wing $1\frac{3}{8}$ lines (3.3 mm.).

Bare, shining, black. Front immaculate. Antennae black. Face produced into a rather large and sharp cone. Lateral line of the thorax pale yellow, very thin. The hind tibiae and the femora black, the tip of the latter and the base and apex of the former yellowish; anterior tibiae subfuscous, with the base broadly and apex narrowly yellowish, sometimes wholly pale yellowish; the last two joints of the yellowish tarsi sometimes infuscated. Halteres whitish. Wings whitish, the stronger veins very pale yellowish. (*Translation.*)

Illinois, (Le Baron)⁽¹⁾; Wisconsin⁽⁴⁾; Pennsylvania, Arizona⁽²⁾; Tabasco, Mexico.⁽³⁾

The male which has not been described before is similar to the female. The outline of the head is naturally different as represented on the plate. The thorax is sometimes decidedly pubescent with very fine whitish hair. Halteres often blackened.

Profile of head of male and female figured on plate.

This is the commonest species in Illinois: Chicago, Glen Ellyn, Algonquin, McHenry are the localities from which I have specimens. May to September. One female from Glen Ellyn has the facial prominence shorter than the head, the antennae reddish beneath and the knob of the halteres blackish. All the other females examined have a longer face, black antennae, and white halteres. Is not *N. unicolor* the form referred by van der Wulp to *nigrinus* Fallén? The descriptions of the European species apply very well to the North American specimens.

A single specimen in the Hough collection taken in Hayti seems closely related to *N. unicolor*. Were it not for the extended distribution of this species and the fact that the Glen Ellyn specimen of *unicolor* represents a similar variation, the West Indian example might be considered another species. Its peculiarities are the following: thorax with a black bronzed tinge; antennae brownish basally; face short, in length less than the width of the eye; length 2.25 mm. See figure. The specimen scarcely seems to be the female of any of the three species occurring within its geographical range. (*N. immaculatus*, *slossonae*, *flavicornis*.)

4. NEMOTELUS CARBONARIUS Loew.

Nemotelus carbonarius Loew, Cent., viii, 6. (1)

Johnson, List ins. New Jersey, p. 639. (2)

Male and female. Bare, black, shining, antennae concolorous, front immaculate, no lateral line on the thorax, femora black except the yellowish tip, anterior tibiae subfuscous, hind ones black, base and extreme tip of all yellowish.

Very much like *Nemotelus unicolor*, but different in its smaller size and in possessing no pale line on the side of the thorax. Halteres subfuscous. Eyes of the male subcontiguous. (*Translation.*)

Length of body 1 lines (3.3 mm.), length of wing $1\frac{7}{8}$ lines.

Lenox, Massachusetts, (Osten Sacken) (1); New Jersey (2).

5. NEMOTELUS TRISTIS Bigot.

Nemotelus tristis Bigot, Ann. soc. ent. France (6), vii, 1887, p. 30. (1)

Male. Face produced as a cone. Black over all, shining; two whitish spots above the antennae, halteres white, knees, base of the tibiae, and the tarsi except the tip pale fulvous; wings hyaline, the strong veins at the base pale yellow.

Female. Very much the same.

Male. Face prolonged in a sharp cone, at least equal to the length of the head. Entirely shining black, two white spots situated above the base of the antennae; halteres with white knob; extremity of the femora, the knees, base of the tibiae and of the tarsi, of a very pale reddish; wings absolutely hyaline, except that the external veins are lightly tinged with yellow. (*Translation.*)

Length 4 mm.

California. (1)

6. NEMOTELUS GLABER Loew.

Nemotelus glaber Loew, Cent., x, 10. (1)

Female. Bare, shining, black, dorsum of the thorax and the scutellum faintly greenish, front immaculate, thorax with a very fine whitish lateral line, femora and tibiae black, tarsi white, the last two joints of the front ones and the last joint of the hinder ones fuscous, knob of the halteres black above.

Bare, shining, black. Front broad, unspotted. Antennae brownish black, towards the base dull red. Face produced into a rather stout acute cone. Dorsum of the thorax and the scutellum obsoletely green from a black ground color; the lateral line of the thorax very fine, whitish. Legs black, the knees dull whitish and the tarsi white, but the last two joints of the front ones and the last joint of the others fuscous. Halteres whitish, the knob black above. Wings whitish, the stronger veins very pale, the rest completely uncolored. (*Translation.*)

Length of body $1\frac{3}{4}$ – $1\frac{3}{4}$ lines, length of wing $1\frac{7}{8}$ – $1\frac{7}{8}$ lines.

Texas, Belfrage. (1)

7. NEMOTELUS CARNEUS Walker.

Nemotelus carneus Walker, Barnston's MSS, List dipt. ins., 3, p. 521. ⁽¹⁾

Female. Black, antennae black, legs yellowish, femora black, tibiae striped with black, wings whitish. (*Translation.*)

Body black, shining; head a little narrower than the chest; eyes piceous; mouth and feelers black; scutcheon unarmed; abdomen much broader, but not longer than the chest; legs tawny; hips and thighs black; tips of thighs tawny; shanks striped with black; wings whitish; wing-ribs tawny; veins and poisers pale yellow.

Length of body $1\frac{1}{2}$ lines (3 mm.) of the wings 3 lines.

St. Martin's Falls, Albany River, Hudson Bay, (G. Barnston). ⁽¹⁾

8. NEMOTELUS PALLIPES Say.

Nemotelus pallipes Say, Journ. acad. nat. sci. Phila., vol. 3, 29. ⁽¹⁾

Ed. Lec., vol. 2, p. 52. ⁽²⁾

Wiedemann, Auss. zweifl. ins., ii, 45, 2. ⁽³⁾

Male. Greenish black, thorax tinged with green; nervures white.

Rostelliform process blued black; polished; antennae brown, at the base of the rostelliform process; front with a triangular white spot above the antennae; thorax punctured, a testaceous line before the wings and another each side on basal edge; poisers and scale pure yellowish white; costal nervure whitish; feet yellowish, base of thighs and middle of posterior edges of the segments of the venter rufous.

Length $\frac{3}{20}$ inch (3.8 mm.).

Pennsylvania. ^(1, 2, 3.)

9. NEMOTELUS POLYPOSUS Say.

Nemotelus polyposus Say, Journ. acad. nat. sci. Phila., vol. 6, 160. ⁽¹⁾

Ed. Lec., vol. 2, 356. ⁽²⁾

Williston, Biol. Centr.-Amer. Dipt. Suppl., 251. ⁽³⁾

Male. Black, feet yellowish; thighs black at base.

Body black, with slight tinge of purplish, polished; wings white; costal and basal nervures yellowish; poisers white; feet honey yellow; thighs except at tip black; tarsi with the terminal joint black; posterior tibiae black in the middle; venter immaculate.

Length not more than $\frac{3}{20}$ inch (3.7 mm.).

Mexico ^(1, 2); Mexico City. ⁽³⁾

10. NEMOTELUS ARATOR, sp. nov.

Female. Olivaceous black, shining, densely pilose with fine dusky yellow hair; head with two transverse yellow spots above the antennae; vertex rounded into the front and on the occiput, facial projection conical, stout, subacute, moderately long, equaling the width of the eye, antennae black, inserted one third the distance out from the frontal spots; proboscis short, fleshy, geniculate at the outer third, the outer part hairy beneath. Thorax without a humeral macule, but with a pale lateral line. Abdomen concolorous with head and thorax, inornate. Femora black, except the knees, hind tibiae blackened in the middle, tarsi infuscated apically. Halteres yellow, the pedicel black. Wings whitish hyaline, the anterior veins testaceous, third vein unbranched, fourth posterior vein arising from base of discal cell.

Male. More pilose, with a more bluish reflection. Frontal spots small, contiguous, eyes contiguous for a short distance only, where they are impressed, facial protuberance much reduced, the antennae arising from its base, proboscis short. Otherwise similar to the female.

Length 4.5–5 mm.

Described from one male and one female from a larger lot of the same species collected by Dr. Wm. M. Wheeler, March 1897, in San Diego Co., California.

Profile of head of male and female and figure of wing illustrated on plate.

11. NEMOTELUS BRUESII, sp. nov.

Female. Black, closely covered with short appressed coarse silvery pubescence. Head short rounded conical; face short, two thirds the diameter of the eye, antennae inserted near the tip of the face, rather long, especially the first two joints, black, arista thick, bristly at tip; front with two narrow transverse white spots, proboscis short, but little longer than the length of the head, geniculate at its outer third, the outer part fleshy and hairy. Thorax with a small humeral spot; lateral line obsolete. Abdomen unmarked. Femora black except tip, tibiae darkened at middle, especially the hind ones, remainder of legs testaceous. Halteres blackened. Wings hyaline, the stronger veins testaceous, third vein furcate before its end; the fourth posterior vein arising at the basal third of the under side of the discal cell.

Male differs in the fine golden pubescence; face stubby, eyes scarcely touching; frontal spots triangular, subcontiguous.

Length 4 mm.

Described from numerous specimens collected by myself and by Mr. Charles T. Brues, my constant fellow-worker, during our stay at the University of Texas, Austin, Texas. This species is abundant during middle April, and shows special partiality for the flowers of *Lepachys columinaris*, the entire collection being made from the flowers growing on the University campus. The species is soon succeeded in the local fauna by *N. trinotatus*.

Profile of head of male and female and arrangement of venation figured on plate.

12. NEMOTELUS TRINOTATUS, sp. nov.

Female. Head long, flat from the tip to the strongly declivous occiput, conical, rather acute, no distinction between front and facial protuberance; totally black, shining, pubescence short appressed sericeous golden, moderately sparse; antennae black, inserted midway between eyes and tip of face; proboscis long, black, geniculate at the middle, the basal half membranous behind, the outer half curved. Thorax black with a very faint greenish tinge, its pubescence like that of the head but denser laterally, humeral mark small, lateral line very narrow. Abdomen black, not greenish, shining, bare, the first segment yellowish in front, the spot broadest medially, second, third, and fourth segments each with a median triangular white mark broadest posteriorly, that of the fourth segment continuous with the yellow hind margin, the entire abdomen margined with a white line broadest caudally and becoming attenuated toward the base of the abdomen; venter black shining, sparsely pubescent, immaculate but with a narrow whitish outline. The markings of the first two segments of abdomen sometimes obliterated. Femora black except the yellowish tip, posterior tibiae blackish in the middle merging into yellow at the base and apex, tarsi light yellow. Halteres white. Wings white, veins concolorous, third vein furcate at tip, fourth posterior vein arising at basal third of underside of the rather large discal cell.

Male differs from the female as follows: facial protuberance shorter and more slender, front with two contiguous white spots, antennae inserted at the base of the protuberance; eyes contiguous and slightly impressed along the line of contiguity. Hairs of thorax less sericeous, silvery. Abdomen wholly white. Hind tibiae with a black spot.

Length ♂ 3.5 mm.; ♀ 4.5 mm.

Described from numerous specimens of both sexes collected during May and June at Austin, Texas, by Mr. C. T. Brues and the writer. The species was abundant during the first weeks of June on the flowers of *SAPINDUS*, the "wild china-berry tree."

Profile of head of male and female figured on plate.

13. NEMOTELUS FLAVICORNIS Johnson.

Nemotelus flavicornis Johnson, Proc. acad. nat. sci. Phila., 1894, p. 272. (1)

Male. Face and vertical triangle black, shining. Facial protuberance prominent, conical; antennae yellow. Facets of the upper half of the eye double the size of those of the lower. Thorax and scutellum greenish black, shining; humeri, and a narrow line from there to the base of the wings, yellow. Abdomen yellow, with a small black subtriangular spot in the center of the fourth and fifth segments; venter yellow. Legs yellow, posterior femora and tibiae with a medial band of dark brown. Wings hyaline, whitish, discal cell emits four veins.

Length $2\frac{1}{2}$ mm.

Kingston, Jamaica. (1)

Mr. Johnson writes that the third vein is simple.

14. NEMOTELUS SLOSSONAE Johnson.

Nemotelus slossonae Johnson, Proc. acad. nat. sci. Phila., 1895, p. 304. ⁽¹⁾

Male. Face and vertical triangle black, shining; facial protuberance very prominent, conical; frontal triangle brown. The upper portion of the eye with large facets brown, the lower third with small facets blackish; antennae dark brown. Thorax and scutellum black, shining; a narrow, light yellow lateral line extends from the humerus to the posterior angle. Abdomen yellowish white; a central mark on the first segment below the scutellum, a dorsal triangle and a small spot near the lateral margin of the fourth, and the fifth except a narrow lateral and posterior margin black; in one specimen there is a minute brown dot near the anterior angle of the third segment. Venter whitish. Legs black; tip of the femora, base and tip of the tibiae, and the tarsi whitish; wings hyaline, whitish; discal cell emits four veins.

Length 3 mm.

Charlotte Harbor, Florida. March. (Mrs. Annie Trumbull Slosson.) ⁽¹⁾

This species also has the third longitudinal vein simple. (C. W. Johnson, *in litt.*)

15. NEMOTELUS ACUTIROSTRIS Loew.

Nemotelus acutirostris Loew, Cent, iii, 13. ⁽¹⁾

Female. Black, shining, clothed with fine whitish hairs, front marked on each side with a white spot, face produced into a very long and sharp cone, the lateral line of the thorax, the margin of the abdomen, and three pairs of spots white, legs whitish, basal half of the femora black. Length of body $1\frac{1}{2}$ lines (3 mm.), length of wing same.

Black, shining, clothed with short and fine white hair. Head concolorous, front marked on each side with a white dot, face produced into a very long and sharp cone, often fuscous above. Antennae black, the first two joints fuscous, rarely yellowish. A humeral spot and a very slender lateral line on the thorax white. Margin of the abdomen white, the second, third, and fourth segments each marked with two long white spots contiguous on the hind margin. Venter often white, sometimes the lateral border and the last segments wholly brown or blackish. Legs whitish, the femora often black except the tip, sometimes also at the base dull whitish, posterior tibiae except the base and tip frequently darkened. Wings whitish, the stronger veins pale yellowish. (*Translation.*)

Cuba, Gundlach. ⁽¹⁾

16. NEMOTELUS IMMACULATUS Johnson.

Nemotelus immaculatus Johnson, Proc. acad. nat. sci. Phila., 1895, p. 304. ⁽¹⁾

Male. Face and vertical triangle blackish; eyes of a dull brown color (probably much lighter than in the living specimen); antennae yellow; proboscis red, unusually long, with an acute angle, the two portions thus formed being of almost equal length, the outer half is

curved downward and the basal part of the other is somewhat enlarged. Thorax black, with sparse whitish pubescence most prominent on the pleurae; scutellum black; abdomen greenish white, immaculate. Legs light yellow; wings hyaline, whitish.

Length 4 mm.

St. Augustine, Florida (F. H. Genung). ⁽¹⁾

17. *NEMOTELUS ALBIROSTRIS* Macquart.

Nemotelus albirostris Macquart, Dipt. exot. Suppl. 4, p. 359; Tab. 3, fig. 8. ⁽¹⁾

Male. Thorax black; abdomen white.

Rostellum a little longer and more drawn out than in *N. pantherinus*; white above, black beneath; proboscis slender and elongate. Front linear. Antennae inserted at the base of the rostellum, yellow, the end of the third joint brown. Thorax black with a green reflection. Abdomen white. Femora black the tip white; tibiae and tarsi white. Halteres white. Wings hyaline. (*Translation.*)

1½ lines (3 mm.).

Virginia (M. Bigot). ⁽¹⁾

The "linear front" probably means that the eyes are subcontiguous as in the males of some of the other species.

Profile of head, redrawn from Macquart's illustration, figured on plate.

18. *NEMOTELUS WHEELERI*, sp. nov.

Male. Head comparatively flattened; rostellum slender, long, yellowish above; antennae fuscous, style slender; two triangular contiguous yellow spots in the frontal triangle; eyes contiguous, not depressed medially, the lower facets small; proboscis twice the length of the head, slender, chitinous, reflexed, geniculate at the basal third. Thorax black, subshining beneath, with short appressed yellow scaly pubescence; humeri and a narrow lateral line pale yellow; pleurae similar; halteres white. Abdomen flat, white over all. Basal three fourths of the femora black merging into the white knees, remainder of legs yellowish. Wings and veins hyaline, third vein furcate, fourth posterior arising near middle of underside of discal cell.

Female. This sex differs from the male as follows: head conical, one half longer than high, occiput flattened; the broad front minutely scabrous, with two rounded spots at the margin of the eye. Abdomen black, except for a paired medial series of transversely elliptical yellowish spots on the posterior margin of the first four segments, the last pair connected with the yellow margin circumscribing the entire abdomen; genitalia yellow; venter blackish, margined with yellow.

Length 4-5 mm.

This pretty little species was secured during the first weeks of June, 1900, at Galveston, Texas, being attracted to an undetermined Composite growing profusely

near the Medical college of the University of Texas. It gives me much pleasure to dedicate this to my instructor, Dr. William Morton Wheeler, who assisted in the capture of these specimens.

Profile of head of male and female figured on plate.

19. NEMOTELUS BELLULUS, sp. nov.

Male. Head globose; rostellum short, black; antennae black, style slender; frontal triangle yellow; eyes contiguous and slightly depressed along their line of meeting, the lower facets not much smaller; proboscis slender, reflexed, chitinous, black, less than twice as long as the head, geniculate at the basal fourth, the outer part strongly curved. Thorax shining black, clothed with fine silvery pubescence; the large humeral spot and a narrow lateral line whitish; pleurae more sparsely pubescent. Abdomen entirely white. Femora black on basal three-fourths, the knees whitish; tibiae black except tips; tarsi yellowish. Halteres white. Wings and veins hyaline, the costal veins, however, yellow, third vein furcate, fourth posterior vein arising near middle of underside of discal cell.

Female differs from the male in the shape of the head and coloration of the abdomen. Head roundedly conical, in profile slightly excavated above; the frontal white spots transversely lengthened. Thoracic pubescence not so fine. Abdomen black with a double series of narrow transverse yellow spots on the posterior margin of the first four segments; the side margin of the first six segments very narrowly yellowish, terminal segments infuscated; venter black, the posterior and side margins of the individual segments very narrowly yellowish.

Length 3–4 mm.

Described from a number of specimens collected at Galveston, Texas, June, 1900.

Profile of head of male and female figured on plate.

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